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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,739	05/09/2001	Ronald Shinogle	00-151	3864

7590 01/22/2003

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EXAMINER

EVANS, ROBIN OCTAVIA

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 01/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,739

Applicant(s)

SHINOGL, RONALD

Examiner

Robin O. Evans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 12-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Election/Restrictions

1. Claims 12-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in Paper No. 4.

2. Applicant's election with traverse of Invention I: claims 1-11 in Paper No. 4 is acknowledged. The traversal is on the ground(s) that the subcombination does not have separate utility and is in fact a nozzle. This is not found persuasive because while it is noted that the fuel injector described in invention 1 is a nozzle, the fuel injector also has separate utility. For example the fuel injector could have separate utility as a nozzle in a hand held torch system or another type of injection system that does not involve the type of engine that is required in the invention of Group II.

The requirement is still deemed proper.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6-8 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 6-8 and 11, it is unclear whether applicant is claiming a subcombination of the fuel injector or the combination of the fuel injector and the engine. The independent claims are drawn only to a fuel injector; however claim 6 recites functional language involving "engine

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compression release braking, but an engine has not been recited in the claims. Clarification is needed.

Since the engine has not positively recited in the claims, and in light of the election as stated in paragraph 1 above, the examiner has taken the position that the claims are drawn to the subcombination of the fuel injector only, thus an engine does not have to be present in the invention and the functional language has been given limited patentable weight.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claims 1-4 and 6-11 are rejected under 35 U.S.C. 102(e) as being anticipated by
Kampmann et al.

Kampmann et al. shows a fuel injector comprising an injector body 2, non-metallic insulator 4 attached to the body, valve seat 13, and a plurality of nozzle outlets 16. It is deemed that the body of the fuel injector must inherently be metallic since it is shown as such by the cross hatch in figure 2.

As to claim 2 and the limitation that the insulator covers the outer surface only above a plane that is perpendicular to said centerline and positioned between said nozzle outlets and said valve seat, note figure 2 and figure 3, which notes plane 20 and centerline 3.

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As to claims 3 and 4 and the limitation that the insulator includes a ceramic material, see column 4, lines 64-67, which discloses that the insulator sleeve is made out of a ceramic material.

As to claim 6 and the limitation that the insulator is sufficiently resistant to heat transfer, note that the limitation is considered to be a functional limitation and has been given patentable weight in as much as the structure shown by Kampmann et al. is capable of performing the function and since Kampmann's device has all of the claimed structural limitations it is deemed that the insulator is inherently capable of performing the recited functional language.

The fuel injector shown by Kampmann et al. will inherently perform the method steps recited in claims 9-11 through normal and operational use of the device.

7. Claims 1, 3, 4 and 8, 9 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato et al.

Kato et al. shows a fuel injector 117 with an insulator 414 attached to the other surface of the body.

As to claim 3 and 4 and the limitation that the insulator is made from ceramic material or is ceramic, see column 12, lines 11-13.

As to claim 8 and the limitation that the insulator is sufficiently resistant to heat transfer, see column 12, lines 31-51, which discloses that the body of the fuel injector is insulated from the cylinder head of the engine and therefore the fuel injector is prevented from overheating.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kampmann et al.

Kampmann et al. shows all of the claimed limitations but does not disclose that the non-metallic insulator is less than about 3 millimeter thick. It is deemed that the size of the insulator will be chosen by the user having a desired effect in mind and since Kampmann et al. discloses in column 5, lines 46-51, that different sleeve bodies are used depending on the application in which the injector is used, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the insulator sleeve less than about 3 millimeters thick so as to achieve a desired result.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kato, Ito et al., Yamaguchi et al., Hosoi et al., Keene, Smith, III et al., Daly and Ryan all shows fuel injectors in the general state of the art of the invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robin O. Evans whose telephone number is (703) 305-5766. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703) 308-2087. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7766 for regular communications and (703) 308-7766 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.


Henry C. Yuen
Supervisory Patent Examiner
Group 3700

roe

January 16, 2003

 1/16/03